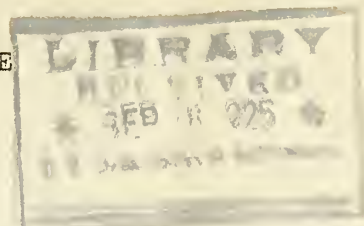


Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.



1
Reserve
C
UNITED STATES DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY



Amendment No. 9 to Circular No. 70, Revised.

By virtue of the authority vested in the Secretary of Agriculture by the United States grain standards Act of August 11, 1916 (39 United States Statutes at Large, p. 432), I, W. M. Jardine, Secretary of Agriculture, do make, prescribe, publish, and give public notice of the following amendment to the regulations of the Secretary of Agriculture, dated July 30, 1920, as revised, under said Act, said amendment to be effective September 1, 1925.

In Regulation 2, Section 23, amend Paragraph (m) to read as follows:

(m) unless issued for an export shipment, a statement of the factor or factors which determined the grade, except in the case of grade No. 1, to which may be added any other factor, or the complete analysis, and for inspections of wheat, oats, feed oats, mixed feed oats, and rye shall include the test weight per bushel, whether such factor determined the grade or not, as follows: In the case of oats, feed oats, and mixed feed oats the test weight shall be given in terms of whole and half pounds, for which purpose a fraction of a pound when equal to or greater than a half shall be treated as a half, and when less than a half shall be disregarded; in the case of wheat and rye, the test weight shall be given in whole pounds and tenths of a pound;

In testimony whereof I have hereunto set my hand and the official seal of the Department of Agriculture, in the City of Washington, this 14th day of August, 1925.

W. M. Jardine

Secretary.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

MEMORANDUM FOR THE RECORD

Subject: [Faint text]

Summary: [Faint text]

Conclusion: [Faint text]

The following table gives the results of the measurements made on the various samples of the material under investigation. The values are given in the units indicated in the heading of each column. The errors are estimated to be of the order of 1% for the first three columns and of the order of 5% for the last two columns.

Sample No.	Length (cm)	Area (cm ²)	Volume (cm ³)	Density (g/cm ³)	Specific Heat (cal/g°C)
1	10.0	1.0	10.0	2.5	0.2
2	15.0	1.5	22.5	2.6	0.2
3	20.0	2.0	40.0	2.7	0.2
4	25.0	2.5	62.5	2.8	0.2
5	30.0	3.0	90.0	2.9	0.2

The above data show that the density and specific heat of the material increase with increasing sample size. This is to be expected since the material is known to be a composite of two different phases. The larger the sample, the more of the denser phase is present.

The following table gives the results of the measurements made on the various samples of the material under investigation. The values are given in the units indicated in the heading of each column. The errors are estimated to be of the order of 1% for the first three columns and of the order of 5% for the last two columns.

Sample No.	Length (cm)	Area (cm ²)	Volume (cm ³)	Density (g/cm ³)	Specific Heat (cal/g°C)
6	35.0	3.5	122.5	3.0	0.2
7	40.0	4.0	160.0	3.1	0.2
8	45.0	4.5	202.5	3.2	0.2
9	50.0	5.0	250.0	3.3	0.2
10	55.0	5.5	302.5	3.4	0.2